FORMALITIES

Applicants respectfully bring to the Examiner's attention that an Information Disclosure Statement was filed with the application on July 18, 2000. Accordingly, the Applicants request that in his next action, the Examiner consider the single reference contained therein and provide the Applicants with a copy of the Form PTO-1449 that has been duly initialed.

REMARKS

Claims 1 through 9 are pending in the subject application. Claims 1-4, and 7 stand rejected under 35 U.S.C. 102(e). Claim 5 stands rejected under 35 U.S.C. 102(b). Claims 6 and 8 stand rejected under 35 U.S.C. 103(a). Claim 1 has been amended. Claims 2-8 have been canceled. Claim 9 has been newly added.

The Applicants appreciate the Examiner's thorough examination of the subject application. The Applicants, however, respectfully request reconsideration of the subject application based on the above amendments and the following remarks.

35 U.S.C. § 102(e) REJECTION

The Examiner rejected claims 1-4 and 7 under 35 USC 102(e) as being anticipated by U.S. Patent Number 6,486,971 to Kawamoto ("Kawamoto" or the "Kawamoto Reference"). Claims 2-8 have been canceled without prejudice and, therefore, the grounds for rejection are moot as they pertain to those claims. With respect to claim 1, the Applicants respectfully traverse these rejections in view of the above amendments and for reasons detailed below.

The object of the invention as claimed is

> to provide an image forming apparatus that allows reduction in circuit board area, reduction in power consumption, and reduction in cost as a result of use of the same component as enlarging FIFO line memory and reducing FIFO line memory during variable-magnification processing in the scan direction, and to provide an image processing apparatus that allows reduction in cost and wherein neither a variable-speed-controlled motor nor a control program for this variable-speed-controlled motor is necessary as a result of the fact that variable-magnification processing is carried out without changing the speed of a scanning unit that captures image data during variable-magnification processing in the cross-scan direction.

Specification, page 4, lines 8-21 (Emphasis added). In short, variable magnification is carried out by two units. An enlarging variable magnification unit carries out variable-magnification processing following write processing and read processing of image data to and from the FIFO memory during image enlargement and a reducing variable magnification unit writes image data to the FIFO memory after variable-magnification processing during image reduction. See, e.g., Id. page 37 to page 41, line 5. Thus, a single FIFO memory carries out read/write processing of image data whether enlarging or reducing units are being used.

Since the enlarging variable magnification unit only carries out enlargement processing of image data, and the reducing variable magnification unit only carries out reduction processing of image data, switching is not necessary as it is for a variable magnification unit in which enlargement processing and reduction processing are carried out in a single unit. As a result, faster processing is ensured, and a complicated signal path is not required.

The Kawamoto reference does not teach, mention or suggest either of these features. On the contrary, the Kawamoto reference discloses an image processing apparatus that outputs

> a plurality of images of an original document with slightly changing the magnification ratio for each of the plurality of

> images, such as[,] for example, changing the magnification ratio for the image in a step of 1%.

Kawamoto, col. 2, lines 24-28 (Emphasis added). Indeed, according to Kawamoto:

> The purpose of changing the modification ratio for the image data stored in the memory device 35 is to slightly [sic] change the size of the image. Therefore, the range of the magnification ratio is relatively small * * * .

Id., col. 7, lines 26-29 (Emphasis added).

Kawamoto teaches a first enlarging/reducing process device and a second enlarging/reducing process device that,

> respectively include an interpolation device 61, a read/write speed control device 62, and a FIFO memory 63, as illustrated in FIGS. 6 and 7.

Id., col. 8, lines 54-58 (Emphasis added). Hence, Kawamoto teaches redundant FIFO memories rather than a single FIFO memory as taught by the present invention. Accordingly, Kawamoto does not anticipate or make obvious claim 1 of the present invention.

With respect to newly added claim 9, variable-magnification processing is realized by gates, which makes it possible to reduce a signal delay and to perform faster processing. Indeed, according to the present invention, a variable-magnification processing means can form image data written in a line memory by controlling a plurality of switching means and by increasing or decreasing the number of times of turning on the switching means provided between the FIFO line memory and a plurality of image forming means. For example, when performing enlargement processing of 2x magnification, two lines worth of image can be simultaneously formed by means of two image forming means by turning on two switching means. Similarly, when performing enlargement processing of 5x magnification, five lines worth of image can be simultaneously formed by means of five image forming means by turning on five switching means. Controlling variable magnification with a plurality of gates and

a plurality of LSUs is not disclosed in Kawamoto or any of the cited references. Accordingly, even if image data are read at a constant reading speed, the invention according to claim 9 has an effect such that an image corresponding to variable-magnification ratio can be formed in a short time.

The Applicants, therefore, believe that claims 1 and 9 are not anticipated by the Kawamoto reference and, further, satisfy the requirements of 35 U.S.C. 100, et seq., especially § 102(e). As such, the Applicants believe that claims 1 and 9 are allowable. Moreover, it is respectfully submitted that the subject application is in a condition for allowance. Early and favorable action is requested.

35 U.S.C. § 102(b) REJECTION

The Examiner rejected claim 5 under 35 USC 102(b) as being anticipated by U.S. Patent Number 5,764,370 to Amakawa ("Amakawa" or the "Amakawa Reference"). Claim 5 has been canceled and, accordingly, the Applicants believe that the grounds for rejection are moot.

35 U.S.C. § 103(a) REJECTION

The Examiner has rejected claim 6 under 35 USC 103(a) as being unpatentable over Amakawa and claim 8 under 35 USC 103(a) as being unpatentable over Amakawa in view of U.S. Patent No. 5,774,234 to Miyamoto, et al. ("Miyamoto" or the "Miyamoto Reference"). Claims 6 and 8 have been canceled and, accordingly, the Applicants believe that the grounds for rejection are moot.

The Applicants believe that no additional fee is required for consideration of the within Response. However, if for any reason the fee paid is inadequate or credit is owed for any excess fee paid, you are hereby authorized and requested to charge Deposit Account No. **04-1105**.

Respectfully submitted,

Date: March 16, 2004

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FIG. 2

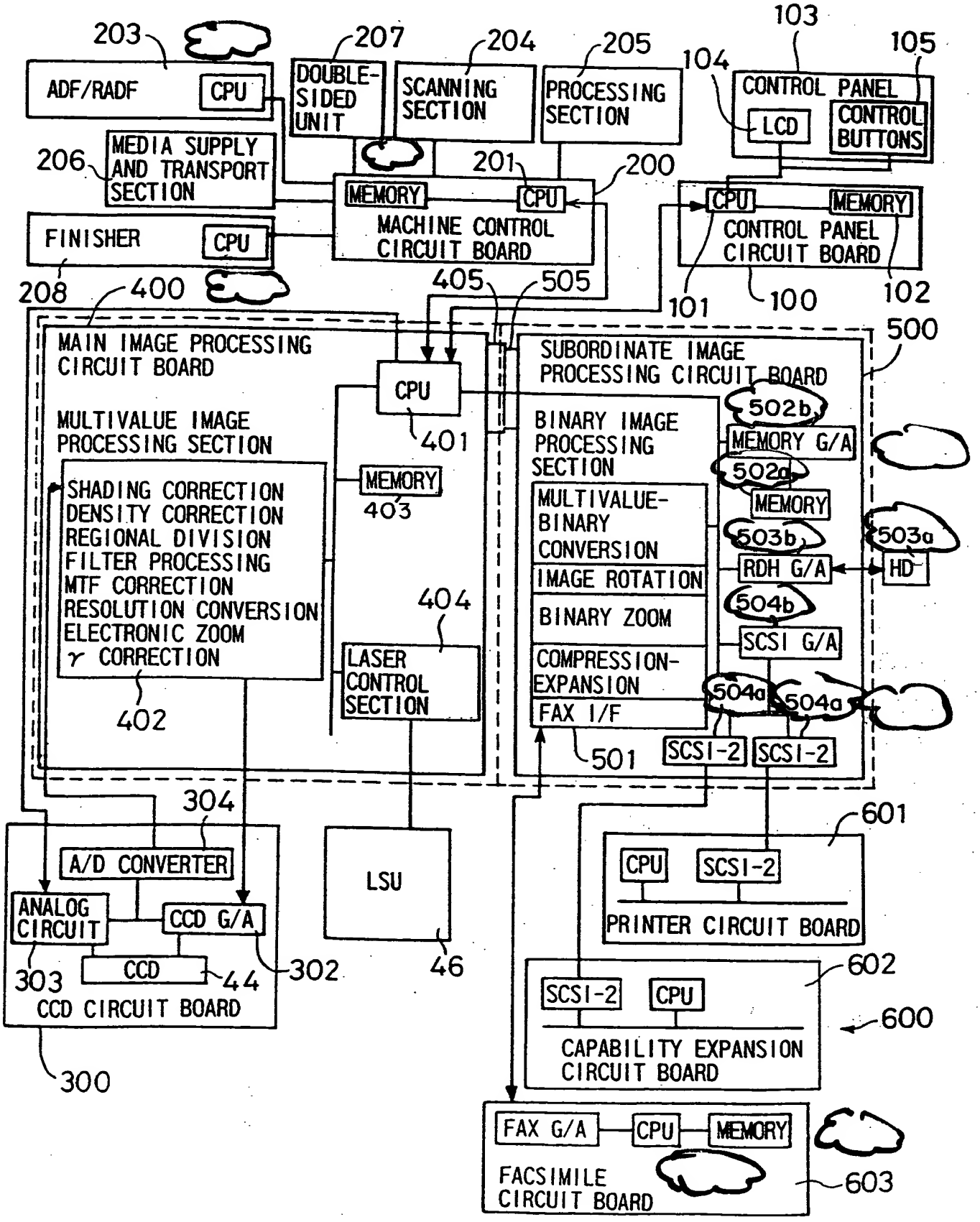

FIG. 11 PRIOR ART

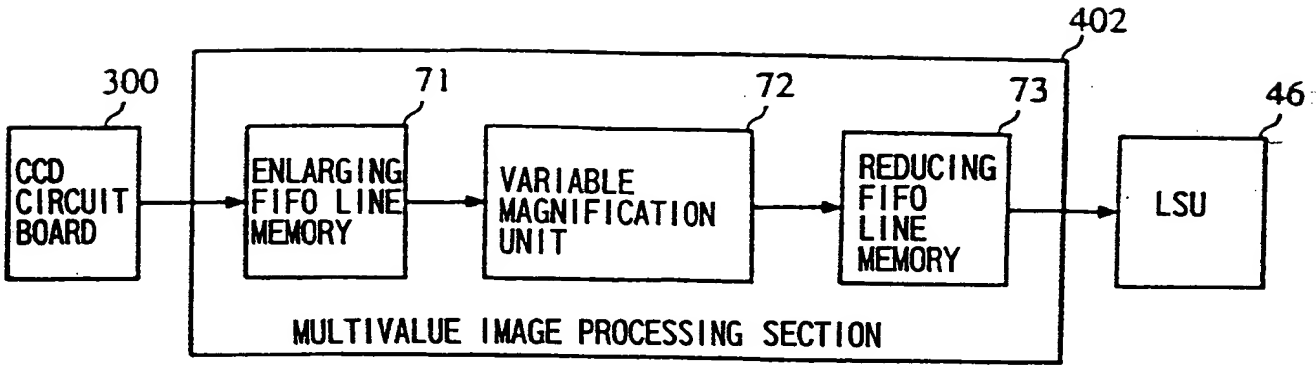

FIG. 12A PRIOR ART

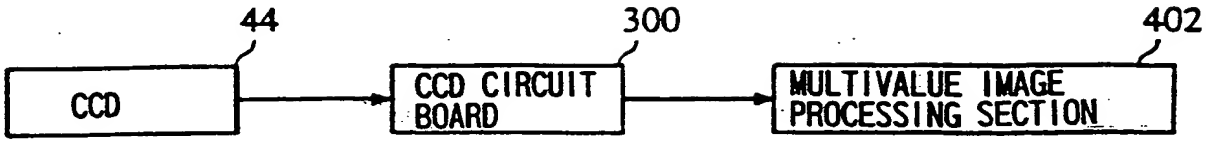

FIG. 12B PRIOR ART

DURING ENLARGEMENT

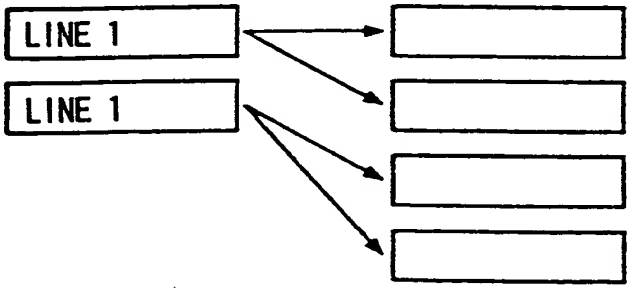

FIG. 12C PRIOR ART

DURING REDUCTION